

PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

PCT



To:

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WRITTEN OPINION OF THE
INTERNATIONAL PRELIMINARY
EXAMINING AUTHORITY

(PCT Rule 66)

Date of mailing
(day/month/year)

15. 6. 2004

Applicant's or agent's file reference

CFO17618WO

REPLY DUE

within **2 months** from
the above date of mailing

International application No.

PCT/JP03 /12771

International filing date (day/month/year)

06.10.2003

Priority date (day/month/year)

08.10.2002

International Patent Classification (IPC) or both national classification and IPC

Int.Cl. **H05B33/14**

Applicant

CANON KABUSHIKI KAISHA

1. ☐ The written opinion established by the International Searching Authority:

☐ is ☐ is not

considered to be a written opinion of the International Preliminary Examining Authority.

2. This **1** (first, etc.) opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☒ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☒ Box No. VIII Certain observations on the international application

3. The applicant is hereby invited to reply to this opinion.

When? See the time limit indicated above. The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.2(e).

How? By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

Also For an additional opportunity to submit amendments, see Rule 66.4.
For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4bis.
For an informal communication with the examiner, see Rule 66.6.

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.

4. The final date by which the international preliminary report on patentability
(Chapter II of the PCT) must be established according to Rule 69.2 is: **08.02.2005**

Name and mailing address of the IPEA/JP

Japan Patent Office

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Authorized officer

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WRITTEN OPINION OF THE
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

International application No.

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Box No. I Basis of the opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

- ☐ This opinion is based on a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this opinion has been established on the basis of *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed.")*:

- ☒ the international application as originally filed/furnished
- ☐ the description:
pages _____ as originally filed/furnished
pages _____ received by this Authority on _____
pages _____ received by this Authority on _____
- ☐ the claims:
pages _____ as originally filed/furnished
pages _____ as amended (together with any statement) under Article 19
pages _____ received by this Authority on _____
pages _____ received by this Authority on _____
- ☐ the drawings:
pages _____ as originally filed/furnished
pages _____ received by this Authority on _____
pages _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (specify): _____
- ☐ any table(s) related to the sequence listing (specify): _____

4. ☐ This opinion has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (specify): _____
- ☐ any table(s) related to the sequence listing (specify): _____

WRITTEN OPINION OF THE
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Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application,

☒ claims Nos. 6, 13

because:

☐ the said international application, or the said claims Nos. _____
relate to the following subject matter which does not require an international preliminary examination (*specify*):

☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. _____
are so unclear that no meaningful opinion could be formed (*specify*):

☒ the claims, or said claims Nos. 6, 13 are so inadequately supported
by the description that no meaningful opinion could be formed.

☐ no international search report has been established for said claims Nos. _____

☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the
Administrative Instructions in that:

the written form

☐

has not been furnished

☐

does not comply with the standard

the computer readable form

☐

has not been furnished

☐

does not comply with the standard

☐ the tables related to the nucleotide and/or amino acid sequence listing do not comply with the technical requirements
provided for in Annex C-bis of the Administrative Instructions in that the computer readable form:

☐

has not been furnished

☐

does not comply with the technical requirements

☐ See Supplemental Box for further details.

WRITTEN OPINION OF THE
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Box No. V Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	_____	YES
	Claims	<u>1-5, 7-12, 14-17</u>	NO
Inventive step (IS)	Claims	_____	YES
	Claims	<u>1-5, 7-12, 14-17</u>	NO
Industrial applicability (IA)	Claims	<u>1-5, 7-12, 14-17</u>	YES
	Claims	_____	NO

2. Citations and explanations

D1: US 2002-21268 A(SEMICONDUCTOR ENERGY LAB.) 2002.02.21, Figs1,2, and paragraphs [0058]-[0063], & JP 2002-141170 A

Claims 1-5,8-12,14-17

Figs1(B),2A, and paragraphs [0058]-[0063] of reference D1 disclose a bottom-emission type light-emitting devices comprising:

a plurality of organic electroluminescence devices each having a light-emitting layer106a or 106b between a first and a second electrode and sharing at least one organic compound layer (hole injecting layer e.t.c):

**said light-emitting layer106a is a red light-emitting layer composed of Alq3 doped with DCM; and
said light-emitting layer106b is a green light-emitting layer composed of CBP doped with Ir(ppy)3.**

Like the embodiment shown in Table1 in the specification of this application, the light-emitting regions of in the light-emitting layer of each device are necessarily located in different positions in the thickness direction of the light emitting layers. Therefore, claims1-5, 8-12, 14-17 lack novelty by or, in the alternative, an inventive step over the light-emitting devices depicted in D1.

Claims 7,14

Last two lines in Paragraph 63 of D1 describe a light-emitting layer preferably having the thickness of 10 to 30 nm.

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Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

Claims 6, 13

Claims 6 and 13 describing a bottom-emission type devices like claims 3 and 10, wherein a first electrode is transparent, have a shorter light-emitting layer whose properties are electron-transporting, and a longer light-emitting layer whose properties are hole-transporting.

On the other hand, judging from the totality of the descriptions of the claimed invention, a bottom-emission type device must have a shorter wavelength light emitting layer whose properties are hole-transporting, and a longer wavelength light-emitting layer whose properties are electron-transporting for the purpose of optimizing the thicknesses of EL layers so as to improve the take-out efficiency of the light.

Thus, the contradictory description among claims 6, 13 and the corresponding portions of the specification renders both claims to be not so adequately supported by the specification that a skilled person in the art could practice them.